IN THE CLAIMS

1. (Cancelled)

2. (Currently Amended) A satellite signal receiver, comprising:

a front end for receiving a satellite signal;

a sampling circuit for digitizing said satellite signal, said digitized signal having either a first sample spacing or a second sample spacing, said second sample spacing being narrower than said first sample spacing;

a mode selection processor for selecting (i) said first sample spacing when performing a convolution for an entire epoch of said satellite signal, and (ii) said second sample spacing when performing said convolution for less than an entire epoch of said satellite signal; and

a processor for performing at least a subset of a convolution between a pseudorandom reference code and said digitized signal;

wherein said sampling circuit comprises:

an analog to digital converter for sampling said satellite signal; and

a subsampling circuit for subsampling said sampled satellite signal to define said digitized signal having either said first sample spacing or said second sample spacing.

3. (Previously Presented) The satellite signal receiver of claim 2, further comprising:

a computer for computing a position location using results of said convolution.

4. (Previously Presented) A satellite signal receiver, comprising:

a front end for receiving a satellite signal;

a sampling circuit for digitizing said satellite signal, said digitized signal having either a first sample spacing or a second sample spacing;

a mode selection processor for selecting either said first sample spacing or said second sample spacing;

a processor for performing at least a subset of a convolution between a pseudorandom reference code and said digitized signal; and

a computer for generating a region of interest in said digitized signal using results of said convolution in response to selection of said first sample spacing.

5. (Original) The satellite signal receiver of claim 4, wherein said processor is configured to perform at least a subset of a second convolution within said region of interest in response to selection of said second sample spacing.

6. (Previously Presented) The satellite signal receiver of claim 4, further comprising:

a plurality of processing channels, where each channel produces at least a subset of a convolution for a different satellite signal.

7. (Original) A receiver of global positioning system (GPS) signals, comprising:

an RF/IF converter for filtering and frequency translating a received GPS signal to form an IF signal;

an analog to digital converter for digitizing said IF signal;

a tuner for removing Doppler shift from said digitized signal and producing an in-phase (I) and a quadrature (Q) signal;

a decimation circuit for subsampling said I and Q signals, said subsampled I and Q signals having either a first sample spacing or a second sample spacing;

a mode selection processor for selecting either said first sample spacing or said second sample spacing; and

a processor for performing at least a subset of a convolution between a C/A reference code and said subsampled I and Q signals.

8. (Original) The receiver of claim 7, wherein said processor comprises:

a code generator for producing a C/A reference code comprising a code lookup table and a first and a second code extender.

9. (Original) The receiver of claim 7, wherein said processor comprises:

a first shift register for storing a segment of said subsampled I signal; and

a second shift register for storing a segment of said subsampled Q signal.

10. (Original) The receiver of claim 7, further comprising:

a plurality of processing channels, where each channel produces at least a subset of a convolution for a different GPS signal.

11. (Original) The receiver of claim 7, further comprising:

a computer for computing a position location using said convolution.

12. (Original) The receiver of claim 7, further comprising:

a second processor for generating a region of interest in said subsampled I and Q signals using said convolution in response to selection of said first sample spacing.

13. (Original) The receiver of claim 12, wherein said processor is configured to perform at least a subset of a second convolution within said region of interest in response to selection of said second sample spacing.

14. (Previously Presented) The receiver of claim 7, further comprising:

a processing circuit for integrating results of said convolution.

15. (Original) A receiver of global positioning system (GPS) signals, comprising:

means for filtering and frequency translating a received GPS signal to form an IF signal;

means for digitizing said IF signal;

means for removing Doppler shift from said digitized signal and producing an in-phase (I) and a quadrature (Q) signal;

means for subsampling said I and Q signals, said subsampled I and Q signals having either a first sample spacing or a second sample spacing;

means for selecting either said first sample spacing or said second sample spacing; and

means for performing at least a subset of a convolution between a C/A reference code and said subsampled I and Q signals.

16. (Original) The receiver of claim 15, further comprising:

means for generating a region of interest in said subsampled I and Q signals using said convolution in response to selection of said first sample spacing.

17. (Original) The receiver of claim 15, wherein said means for performing is configured to perform at least a subset of a second convolution within said region of interest in response to selection of said second sample spacing.

18. (Previously Presented) The satellite signal receiver of claim 4, wherein the computer is further configured to compute a position location using results of said convolution.

19. (Previously Presented) The satellite signal receiver of claim 2, further comprising:

a plurality of processing channels, where each channel produces at least a subset of a convolution for a different satellite signal.